WHAT IS CLAIMED IS:

1   1.   A computer based method for mining a plurality of experiment
2   information for a pattern, said method comprising:
3   collecting information from experiments and chip designs;
4   selecting from said experiments and said chip designs ones to be mined;
5   defining at least one of a plurality of groupings for said experiments to be
6   mined;
7   selecting based upon said at least one of a plurality of groupings,
8   information about said plurality of experiments to be mined, forming a plurality of
9   resulting information, said plurality of resulting information including at least a resulting
10 gene set; and
11   formatting said plurality of resulting information for viewing by a user.

1   2.   The method of claim 1 wherein experiments to be mined are
2   selected based upon at least one of a plurality of experimental analyses.

1   3.   The method of claim 1 wherein said at least one of a plurality of
2   groupings is a sample type.

1   4.   The method of claim 1 wherein said at least one of a plurality of
2   groupings is a sample attribute.

1   5.   The method of claim 1 wherein said plurality of groupings are
2   sample attributes having a non-hierarchical arrangement.

1   6.   The method of claim 1 further comprising adding experiments to
2   said experiments to be mined.

1   7   The method of claim 1 further comprising deleting experiments to
2   said experiments to be mined.

1   8   The method of claim 1 wherein said pattern is a gene pathway.

1   9   The method of claim 1 wherein said pattern is a drug toxicity.

1   10.   The method of claim 1 further comprising enabling a user to apply

2   set theory operations on said resulting gene sets.

1   11.   A computer based method for working with expression

2   information, said method comprising:

3   collecting information about a plurality of results of a plurality of

4   experiments;

5   gathering information about samples and information about said plurality

6   of experiments;

7   adding at least one of a plurality of attributes to said information about

8   said plurality of experiments;

9   transforming said plurality of results of experiments, to form a plurality of

10   transformed information;

11   mining said plurality of transformed information; and

12   visualizing said plurality of transformed information.

1   12.   The method of claim 11 wherein said information about said

2   plurality of experiments comprises at least one of a plurality of experimental analyses.

1   13.   The method of claim 12 wherein said at least one of a plurality of

2   experimental analyses comprises one or more experimental analyses.

1   14.   The method of claim 11 wherein said transforming comprises

2   normalizing and said transformed information comprises normalized information.

1   15.   The method of claim 11 further comprising recording one or more

2   results of said mining said plurality of transformed information.

1   16.   The method of claim 11 further comprising citing theories about

2   said transformed information.

1   17.   A computer program product for mining a plurality of experiment

2   information for a pattern, said computer program product comprising:

3   code for collecting information from experiments and chip designs;

4   code for selecting a subset of said experiments and said chip designs, said

5   subset being a plurality of experiments to be mined;

6   code for defining at least one of a plurality of groupings for said

7 experiments to be mined;

8   code for selecting based upon said at least one of a plurality of groupings,

9 information about said plurality of experiments to be mined, to form a plurality of

10 resulting information, said plurality of resulting information including at least a resulting

11 gene set;

12   code for formatting said plurality of resulting information for viewing by a

13 user; and

14   a computer readable storage medium for containing the codes.

1   18. The program product of claim 17 wherein said at least one of a

2 plurality of groupings is a sample type.

1   19. The computer program product of claim 17 wherein said at least

2 one of a plurality of groupings is a sample attribute.

1   20. The computer program product of claim 17 wherein said plurality

2 of groupings are sample attributes having a non-hierarchical arrangement.

1   21. The computer program product of claim 17 further comprising

2 code for adding experiments to said experiments to be mined.

1   22. The computer program product of claim 17 further comprising

2 code for deleting experiments to said experiments to be mined.

1   23. The computer program product of claim 17 wherein said pattern is

2 a gene pathway.

1   24. The computer program product of claim 17 wherein said pattern is

2 a drug toxicity.

1   25. The computer program product of claim 17 further comprising

2 code for enabling a user to apply set theory operations on said resulting gene sets.

1   26. A computer program product for working with expression

2 information, said computer program product comprising:

3   code for collecting information about a plurality of results of a plurality of

4 experiments;

5 code for gathering information about samples and information about said

6 plurality of experiments;

7 code for adding at least one of a plurality of attributes to said information

8 about said plurality of experiments;

9 code for transforming said plurality of results of experiments, to form a

10 plurality of transformed information;

11 code for mining said plurality of transformed information;

12 code for visualizing said plurality of transformed information; and

13 a computer readable storage medium for storing the codes.

1 27. The computer program product of claim 26 further comprising

2 code for citing theories about said transformed information.

1 28. The computer program product of claim 26 wherein said code for

2 transforming further comprises code for normalizing and said transformed information

3 further comprises normalized information.

1 29. A system for managing expression information comprising:

2 a database;

3 a computer memory; and

4 a processor, said processor operatively disposed to:

5 collect information about a plurality of results of a plurality of

6 experiments;

7 gather information about samples and information about said plurality of

8 experiments;

9 add at least one of a plurality of attributes to said information about said

10 plurality of experiments;

11 transform said plurality of results of experiments, to form a plurality of

12 transformed information;

13 mine said plurality of transformed information; and

14 visualize said plurality of transformed information.